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## TEN - YEAR COMPARISON OF SANATORIUM PATIENTS


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During the past several years early diagnosis programs have been conducted to find cases of tuberculosis in the minimal stages of the disease. These programs have consisted of publicity to consult your family physician, routine tuberculin testing and x-raying contacts of known tuberculous cases.

With the above in mind it would not be amiss to endeavor to evaluate the degree of success of these programs. Of course an accurate check cannot be obtained on their absolute effectiveness, but some inferences may be drawn by a comparison of the admissions and discharges in the sanatorium this past year with those of ten years ago.

Since the adult type of pulmonary lesions are the serious ones, these tables deal only with this condition, that is, an exclusion of the extra pulmonary and the first infection type lesions (childhood type) is made. The following tables are a comparison of the admissions for the fiscal year 1928-1929 and 1938-1939:

**TABLE No. 1**
**AGE AND CONDITION OF PATIENTS ADMITTED**
**1928-1929**

| | Min. | | Mod. Adv. | | Advanced | | Total | |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F |
| 10-20 yrs. | | | | 2 | | | | 2 |
| 20-30 " | | 1 | 7 | 6 | 5 | 9 | 12 | 16 |
| 30-40 " | | | 4 | 2 | 3 | 3 | 7 | 5 |
| 40-50 " | 1 | 1 | | 3 | 8 | 5 | 9 | 9 |
| 50-60 " | | | 5 | 3 | 1 | | 6 | 3 |
| 60-70 " | | | | 2 | 3 | | 3 | 2 |
| SUB-TOTAL | 1 | 2 | 16 | 18 | 20 | 17 | 37 | 37 |
| TOTAL | 3 | | 34 | | 37 | | 74 | |
| PERCENTAGE | 4.1% | | 45.9% | | 50% | | | |

**TABLE No. 2**
**AGE AND CONDITION OF PATIENTS ADMITTED**
**1938-1939**

| | Min. | | Mod. Adv. | | Advanced | | Total | |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F |
| 10-20 yrs. | | 1 | 1 | | 1 | 2 | 2 | 3 |
| 20-30 " | 1 | 5 | 1 | 3 | 5 | 14 | 7 | 22 |
| 30-40 " | 3 | 2 | 2 | 1 | 17 | 11 | 22 | 14 |
| 40-50 " | 1 | | 1 | 2 | 8 | 1 | 10 | 3 |
| 50-60 " | | 2 | | 1 | 4 | | 4 | 3 |
| 60-70 " | | | | | 2 | | 2 | |
| 70-80 " | | | | 1 | 1 | | 1 | 1 |
| SUB-TOTAL | 5 | 10 | 5 | 8 | 38 | 28 | 48 | 46 |
| TOTAL | 15 | | 13 | | 66 | | 94 | |
| PERCENTAGE | 16% | | 13.8% | | 70.2% | | | |

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One will note from the above there were three cases of minimal tuberculosis admitted or 4.1% of the total ten years ago, while fifteen cases were admitted last year or 16% of the total admissions. On looking up the records of these fifteen cases as to the source through which they were referred to the sanatorium, we find that eight of the fifteen were contacts of known tuberculosis cases, six (three were contacts) were referred by physicians and the others through various agencies.

These minimal cases appear to be at the sacrifice of the moderately advanced cases on comparing this past year with ten years ago, as this past year, there were admitted 29.8% minimal and moderately advanced cases, while in 1928-1929 there were 47% minimal and moderately advanced cases hospitalized. Of the total admissions 1928-1929, thirty-seven cases were far advanced or 50%, while in 1938-1939, sixty-six cases were far advanced or 70.2%. Therefore, this past year there was admitted quite a higher per cent of far advanced cases in comparison to ten years ago.

**TABLE No. 3**
**DISCHARGED CASES IN 1929**

| | App. Arrested | | Improv. | | Unimp. | | Died | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F |
| Minimal | 1 | 1 | 1 | | | | | | 2 | 1 |
| Mod. Adv. | | 5 | 7 | 7 | 6 | 2 | 1 | 3 | 14 | 17 |
| Far Adv. | | | 3 | | 4 | 7 | 10 | 11 | 17 | 18 |
| Sub-Total | 1 | 6 | 11 | 7 | 10 | 9 | 11 | 14 | 33 | 36 |
| Total | 7 | | 18 | | 19 | | 25 | | 69 | |
| Percentage | 10.2% | | 26.1% | | 27.5% | | 36.2% | | | |

**DISCHARGED CASES IN 1938-1939**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Minimal | | 1 | 3 | 7 | 1 | | | | 4 | 8 |
| Mod. Adv. | 1 | 5 | 10 | 6 | | | 1 | 1 | 12 | 12 |
| Far Adv. | 1 | 1 | 7 | 5 | 11 | 7 | 16 | 15 | 35 | 28 |
| Sub-Total | 2 | 7 | 20 | 18 | 12 | 7 | 17 | 16 | 51 | 48 |
| Total | 9 | | 38 | | 19 | | 33 | | 99 | |
| Percentage | 9.1% | | 38.4% | | 19.2% | | 33.3% | | | |

Now, as regards the comparison of the cases discharged during these two year periods, the percentages run fairly close, however, the apparently arrested and improved cases are somewhat higher for the past year, namely, thirty-six point three per cent (36.3%) in 1928-1929 and forty-seven

point five (47.5%) in 1938-1939. Since we are not receiving any better type of cases, the improvement on discharge may be accounted to some extent by more extensive surgical procedures being employed the past few years.

Conclusions: It appears from the comparison of these two year periods that the sanatorium is not receiving at the present time any more favorable cases than were hospitalized ten years ago.

However, there does appear to be an increase in the number of minimal cases admitted to the sanatorium, sixty per cent of which were found by examining (x-ray) contacts of known tuberculous cases. Therefore it seems that a program for early case findings should particularly stress work among the contact group.

## INCIDENCE OF SYPHILIS IN DELAWARE

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Delaware reported to the United States Public Health Service 3048 cases of syphilis in the twelve-month period from July 1, 1938 to June 30, 1939. This gives an average monthly incidence of ten cases per 10,000 population, the population of Delaware being estimated at 253,000.

The Department had estimated that the incidence of syphilis in the white race is somewhat less than 5%, and between 25 and 30% for the colored in this state, with little difference between rural and urban areas. That this estimate for the white incidence is not quite correct will be shown in this paper. The question arose as to the prevalence of syphilis in certain economic and social groups in the state.

Dr. Parran had written to the University of Delaware concerning a serological survey there and the faculty voted that it should be undertaken on a voluntary basis, the State Board of Health staff doing the work.

The laboratory of the State Board of Health has had a consistently high rating in all the evaluation studies of serodiagnostic tests for syphilis conducted by the United States Public Health Service. Both Kahn and Kolmer Wassermann tests are performed routinely on all specimens submitted. Knowing that our serodiagnostic work was of high quality, a serologic survey was made upon the students at the University of Delaware in the autumn of 1938. There were tested 868 of the 918 students enrolled, a percentage of 94.5. In this group there were eleven doubtful Kahn or Kolmer Wassermann tests, ten of which were subsequently checked and found negative. In addition to these eleven, there was but one student who had a strongly positive Wassermann and Kahn, this was also rechecked, with the same result. This student is probably a case of congenital syphilis and is now under the care of his family physician. The student was entirely unaware of the condition prior to being tested. This gives the remarkably low incidence of .11% positive reactions in those tested. Incidentally, specimens from 13 faculty members were tested and were all found to be negative. Of the 50 students, or 5.5% of the student body who were not tested, it cannot be said that they all have syphilis because in any group of this size there are always a few who, because the testing is entirely voluntary, find it is too much trouble to be present when the blood samples are taken, and also the fear of being hurt is a factor to be considered. There were undoubtedly a very few of this group who knowing they had syphilis did not volunteer for the test. The writer knows of one instance of this. The incidence of syphilis in this college group is extremely low, however, and this is substantiated by the results of the tests made upon the girls at the white girls' industrial school and upon those on parole. Here 166 were tested and 165 were negative, a percentage of 0.62% positive reactions. The positive case was one that had been treated in a Board of Health venereal disease clinic prior to her commitment.

From the colored girls industrial school tests were made on specimens from 87 individuals, 66 were negative and 21 positive, or 23.8%.

At the Wilmington City Board of Health blood specimens were taken during 1938-39 and tested by the State Laboratory, on 257

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white and 42 colored N. Y. A. employes. The percentage of positive reactions was .78% for the white, and 14.8% for the colored. Of 197 colored domestics tested, 191 of whom were females, 27.9% were found to be positive.

1204 white food handlers were also tested and 31, or 2.57% were found to be positive; however, in the previous year and a half there had been 24 food handlers with positive reactions who had been placed under treatment. These persons reported for food handlers' cards but since they were under antiluetic treatment blood specimens were not taken at the laboratory, therefore, these should be added to the above figures, and the corrected incidence of syphilis among the white food handlers of Wilmington would be about 4.5%. There were 203 colored food handlers of whom 67, or 33%, were positive; in correcting the incidence as above, there would have been 55 additional positives, or 47.2%.

Serological tests were made on the children at the WPA nursery schools in Wilmington during 1938-39. Of the 59 white children tested there were no positive reactions, and of the 41 colored children tested there were two positives, an incidence of 0% for the white and 4.8% for the colored. The total figures are small, and since the two positive reactors were brothers, the percentage figure for the colored is not very significant.

The food handlers of Rehoboth Beach were given serological tests during June and July of 1939, and of 161 whites there were 5 positives (31%), while of the 130 colored tested there were 40 positives, or 30.0%. For simplification, doubtful negative reports from the laboratory were considered negatives while doubtful positive reactions were considered positive in this survey at Rehoboth Beach.

The total number of specimens for the whites was 2715, with positive reactors, or 1.47%. Adding the 24 positive food handlers that would have been tested if they had not been under treatment the percentage is 2.3% positives. Of the 700 colored tested, there were 191 positives, or 27.3%, and adding the 55 positive food handlers already under treatment to the total number and to the number of positives the corrected percentage is 32.58%. The following table shows the results of the testing done:

On the basis of the above figures and considering that the Kahn & Kolmer tests as performed in our laboratory have a sensitivity of about 79%, and considering the composition of the population as given in the 1930 Census, it is estimated that the incidence of syphilis in Delaware is less than 2% for the white and about 30% for the colored population.

## SUMMARY

1. 868 or 94.5% of the students at the University of Delaware were tested by the Kahn and Wassermann tests, and but one positive was found, an incidence of 0.11%.

2. Other groups were also tested and the percentage of positive reactors ranged from 0.% to 4.5% in the whites, and from 4.8% to 47.2% in the colored.

3. From the figures presented of serodiagnostic tests, it is estimated that less than 2% of the white and about 30% of the colored population of Delaware have syphilis.

SEROLOGICAL SURVEY IN DELAWARE JULY 1, 1938 TO JUNE 30, 1939

| Group Tested | Total Number | Sex | Color | Approx. Age | Neg. | Pos. | % Pos. | Cases pos. in previous year | Corrected incidence |
|---|---|---|---|---|---|---|---|---|---|
| Univ. of Del. Students | 868 | M % F | W | 17-24 | 867 | 1 | 0.11% | | |
| N. Y. A. | 257 | 144 M 155 F | W | 14-22 | 255 | 2 | 0.78% | | |
| | 42 | | C | 14-22 | 36 | 6— 4 M 2 F | 14.8% | | |
| Domestic Service, (Wilmington) | 197 | 6 M 191 F | C | 14-70 | 142 | 55 | 27.9% | | |
| Food Handlers, (Wilmington) | 1204 | M & F | W | 14-70 | 1173 | 31—16 M 15 F | 2.57% | 24 | 4.48% |
| " " " | 203 | M & F | C | | 136 | 67—37 M 30 F | 33.% | 55 | 47.2% |
| W. P. A. Nursery | 59 | M & F | W | 2-5 | 59 | 0 | 0. | | |
| Schools | 41 | M & F | C | | 39 | 2 | 4.8% | | |
| Food Handlers, (Rehoboth Beach) | 161 | M & F | W | 14-60 | 156 | 5 | 3.1% | | |
| " " " " | 130 | M & F | C | | 90 | 40 | 30.0% | | |
| Colored Girls' Ind. School (1938) | 87 | F | C | 14-21 | 66 | 21 | 23.8% | | |
| Girls' Ind. School (year 1938) | 166 | F | W | 14-25 | 165 | 1 | .62% | | |
| Total White | 2715 | M & F | W | | 2675 | 40 | 1.47% | 24 | 2.3% |
| Colored | 700 | M & F | C | | 509 | 191 | 27.3% | 55 | 32.58% |

# CLASSIFICATION OF CASES ADMITTED TO THE STATE BOARD OF HEALTH VENEREAL DISEASE CLINICS

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In order to evaluate the work being done by the Venereal Disease Clinics operated by the State Board of Health a survey has been made to determine the distribution as regards sex, race, stage of syphilis, etc., of the cases admitted during the fiscal year 1938-1939. This analysis has brought out several very interesting facts.

Prior to September 13, 1938 all of the State Board of Health Clinics were in the rural portion of the state. On that date a Clinic for Negroes was opened at 910 French street, Wilmington, as a special cooperative project of the U. S. P. H. S., the City of Wilmington, and the State Board of Health for the purpose of relieving the overcrowded hospital clinics. A clinic was opened in Middletown in February, and one at Rehoboth Beach in June. This provided clinics in Wilmington, Newark, Middletown, Smyrna, Dover, Georgetown, Seaford, Frankford and Rehoboth. In February the Wilmington clinic was moved to larger quarters at 301 Shipley street and the number of clinics was increased from three to five. All told 15 clinic sessions are held each week in the state.

In making this survey the record of each patient who had received treatment between July 1, 1938 and June 30, 1939 was examined. However, this report is confined to those who had received no treatment prior to July 1, 1938.

The following table shows the distribution of cases of syphilis admitted:

CLASSIFICATION OF SYPHILIS CASES ADMITTED TO STATE BOARD OF HEALTH CLINICS

| Classification | Sex | White | Colored | Total Sex | Total | Per-centage |
|---|---|---|---|---|---|---|
| Primary | Male | 1 | 16 | 17 | 19 | 2.7% |
| | Female | 0 | 2 | 2 | | |
| Secondary | Male | 0 | 11 | 11 | 44 | 6.2% |
| | Female | 1 | 32 | 33 | | |
| Early | Male | 7 | 94 | 101 | 259 | 36.4% |
| latent | Female | 4 | 154 | 158 | | |
| Late | Male | 2 | 90 | 92 | 199 | 28.0% |
| latent | Female | 2 | 105 | 107 | | |
| Latent | Male | 0 | 9 | 9 | 23 | 3.2% |
| (unclassified) | Female | 0 | 14 | 14 | | |
| Tertiary | Male | 5 | 51 | 56 | 112 | 15.7% |
| | Female | 2 | 54 | 56 | | |
| Congenital | Male | 2 | 31 | 33 | 56 | 7.8% |
| | Female | 2 | 21 | 23 | | |
| Total | Male | 17 | 302 | 319 | 712 | |
| | Female | 11 | 382 | 393 | | |
| | | 28 | 684 | | | |
| Total | | 712 | | | | |

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The most highly infectious cases, those with primary and secondary lesions comprised 63 or 8.9% of the total. Only two chancres were found in females, which is in keeping with the usual experience. However, 3 times as many secondary cases were found in women as in men. 26 of the primary and secondary cases were referred by physicians, and 20 were found as a result of contact investigation by the State Board of Health.

The next group, the early latent cases, are those who had contracted syphilis within the last five years and who showed nothing more than positive serological reactions. These, while infectious, are probably in that condition for only a part of the time, the chances of transmission becoming less with the increasing age of the infection. The duration of the infection was established by various means: from a definite history of primary or secondary lesions, a previous negative blood test and at times by circumstantial evidence such as the infection of a partner, or a series of abortions after the birth of normal children. 74 of these were referred by physicians and 43 were found as contacts.

There is another group, the women in the child-bearing period who have late latent or tertiary syphilis and while they are probably not infectious except as regards their future offspring, it is necessary to consider them as potentially infectious. In this group there were 153 women below the age of 45 years.

This gives a total of 475 infectious and potentially infectious cases, of which 16 are white and 459 colored. These comprise 67.5% of the total admissions. 219 of the colored were admitted to the new Wilmington clinic and 240 were from the rural areas. In Sussex county, particularly, a large number of these, were found among the migratory cannery and field workers.

During the year 112 cases of tertiary syphilis were admitted. These were grouped as follows: neurosyphilis, 26; cardiovascular, 54; cutaneous, 7; osseous, 2; visceral (gastric, hepatic, etc.), 5. In addition to these, there were 4 Negro women with rectal strictures who also had positive Frei tests, and it could not be determined whether the strictures

were due to syphilis or lymphopathia venerum.

During the year 24 women were admitted in various stages of pregnancy, unfortunately most of them five months or later. Eighteen others were carried over from the previous year. Among the new cases one was in the secondary stage, 14 in the early latent, 8 in the late latent and one had congenital syphilis.

33 white patients and 162 colored, a total of 195, were referred by practicing physicians. Of these 100 were definitely infectious. 2 white and 117 colored patients were secured as the result of contact investigation, of these 63 were definitely infectious. In both of these groups there are women who, while not classed as infectious, might give birth to syphilitic children. The remaining 398 patients were referred by hospital clinics, jails, discovered as a result of serologic tests taken during the examination of food handlers in Wilmington, or came in on the advice of friends, etc.

In addition to the new admissions, 581 cases, of which 323 were infectious on admission, were carried over from the previous year, making a total of 1293, of whom 798 were considered infectious or potentially infectious, under treatment during the year.

The admissions for syphilis far outnumbered those for all the other veneral diseases. 12 white and 40 colored females and 16 white and 58 colored males were admitted with gonorrhea, a total of 136. It will be noted that the white patients constitute 20.6% of these, in contrast to 3.9% in the case of syphilis.

Eight cases of lymphopathia venerum were admitted, four of each sex. Of these, the four females were all suffering from rectal strictures. All had syphilis as well.

85 cases of gonorrhea and 3 of lymphopathia venerum were carried over from the preceding year.

It is the policy of the State Board of Health to stress the treatment of infectious cases, using all possible means to insure the patient receiving regular and adequate treatment and follow-up visits are made by the staff nurses. Resort to police power is made only in extreme cases. Excessive or premature use of this power tends to keep prospective patients from presenting themselves through fear. Treatment is provided for all cases, but we believe that we should concentrate our efforts on the infectious cases, of which class we know there are more than our present facilities can care for adequately.

It is to be hoped that the low ratio of white admissions is a true measure of the relative proportion in the general population, influenced of course by the fact that some white and a few colored are able to secure private treatment. It is much more probable, however, that there are many white persons in the lower economic levels who are not receiving private treatment and yet who will not go to a clinic because of pride. We believe that fair progress is being made toward the control of syphilis among the colored race, but we are very doubtful if this can be said for the white.

## SUMMARY

A study was made of all admissions to the State Board of Health Venereal Disease Clinics for the fiscal year 1938-39. 712 cases of syphilis were admitted, of which 19 were in the primary stage, 44 in the secondary, 259 in the early latent, 199 late latent, 23 latent (but not classified), 112 tertiary and 56 were congenital. Of these 28 were white and 684 colored; 319 male and 393 female. 475 cases were classed as either infectious or potentially infectious. 24 women in pregnancy were admitted. 33 white and 162 colored patients were referred by physicians. 2 white and 117 colored were found by epidemiological investigations.

12 white and 40 colored females and 16 white and 58 colored males were admitted with gonorrhea, a total of 136.

8 cases of lymphopathia venerum, 4 male and 4 female, were admitted.

581 cases of syphilis, 85 of gonorrhea and 3 of lymphopathia venerum were carried over from the preceding year.

A total of 1293 cases of syphilis, of whom 798 were considered infectious or potentially infectious, received treatment during the year.

## EPIDEMIOLOGICAL CONTROL OF SYPHILIS IN DELAWARE

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The problem of venereal disease control presents many public health aspects. The infectiousness of the disease in its early stages, the late complications of the disease which may make public charges of the patients, and which may require various forms of specialized treatment, the dangers of maternal transmission to the fetus with all of its implications, the unsatisfactory method of treatment which requires regular, expensive, unpleasant procedures over a long period of time, and the tremendous amount of publicity and public education necessary in any control effort all tend to make it impractical for the average practitioner to handle more than a few of these cases successfully without the aid of public health agencies. By successful treatment is meant an alternating, continuous arsenical-bismuth course such as that recognized by the Cooperative Clinical Group, consisting of at least 30 arsenical injections and an equal amount of bismuth. Effective treatment is especially difficult to obtain in those patients in the lower economic groups or those of limited intelligence in whom the necessary cooperation is difficult to maintain for more than a short period.

In any program of syphilis control one of the principle objectives is the treatment of early cases of syphilis in an effort to reduce their infectiousness. To be effective, this work must be available to every one, regardless of location and regardless of ability to pay. With the present set-up in this state, i. e., the supplying of free antisyphilitic drugs to physicians for all cases and the well distributed anti-luetic clinics throughout the state, treatment facilities are within fairly easy reach of almost every one.

With treatment facilities provided, the essential problem that remains is the finding of new cases of syphilis, particularly the early infectious ones so that they may be given medical care and rendered non-infectious as soon as possible. This is best done through the investigation of all intimate contacts of every case of syphilis with particular emphasis, of course, on the early infectious cases. Three factors tend to make this work difficult: (1) the fact that many acquire syphilis without knowing it, and this is particularly true of females; (2) most syphilitic infections are in the younger group and least educated group, and being ignorant of the symptoms and the consequences of a syphilitic infection they are not greatly concerned over inconveniencing themselves to the point of having an examination made; (3) the natural reluctance and shame that many still associate with the disease.

One nurse in each County Health Unit and 3 in the city of Wilmington devote their full time to V. D. work, and a large part of their time outside of clinic work is spent in the investigation and follow up of contact and delinquent cases. As a routine part of the history taking of each new V. D. patient, the clinic physician questions the patient concerning all intimate contacts in regards to sources of infection and those to whom the disease may have been given. A space on the history card is available for the name of the contact and the date and result of the subsequent examination. These names are investigated by the nurse, the individuals located and advised that they have been exposed to a communicable disease and to have an examination done as soon as possible, either by their doctor or at the clinic. The locating of these individuals is at times very difficult as names and addresses, particularly in the colored race, may be changed frequently. Occasional refusals are encountered. While the venereal disease law is very definite in dealing with these delinquent contacts or suspects, it is seldom invoked unless the name has been given by several different individuals or unless circumstances point to fairly certain exposure to an infectious case. This work is all done confidentially, without revealing the source of information concerning the contact or suspect.

While the clinic sees many new early cases of syphilis, quite probably they see the minority of the total. Many go undiscovered or do not bother to seek medical attention. But there are many who see their family

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physician or their local physician when they first begin to have trouble and it is this group that is in need of investigation and follow-up work in many instances.

Most practitioners are still not reporting their syphilis cases. This is readily understandable. Probably the majority are not reported merely because of neglect or because the doctor never has been in the habit of doing it and it is difficult to start. At times there is a natural reluctance to subject the patient to possible undesired exposure. There is no basis for this reluctance, however, as the fact that reporting of cases by number is permissible will at all times confine the identity of the patient to the physician. Other cases are never reported because the physician feels that a positive Wassermann laboratory slip is sufficient information for the state. This is inaccurate, as many slips give incomplete information, there are frequent duplications and repeats and there is not room on the slip for giving all the epidemiological data necessary.

With the improved reporting of all cases of syphilis by the physicians, some idea of the problem in Delaware could be obtained and some measure of the efforts necessary to control the disease could be determined. The physicians would be asked to treat those whom they wished and the remainder would be immediately and automatically referred to the nearest clinic without the loss of time that is so dangerous in the early cases, and which is frequently observed now. If the physician encountered a patient in whom regular treatment was not being satisfactorily maintained or whose contacts could not be located, or who refused to come in to his office, a trained public health worker could, at his request, aid him in bringing them in to him.

All of this would be done in an effort to accomplish three things: (1) to aid the physician in seeing that his patients or the ones he has referred to the clinics receive immediate and sufficient treatment in order to prevent the spread of infection; (2) to aid in the attempt to locate and examine all contacts and to find the source of infection if possible; and (3) to give the patient the benefit of the regular and adequate treatment

**TABLE No. 1**

**RESULTS OF CONTACT INVESTIGATION OF PRIMARY & SECONDARY CASES OF SYPHILIS IN SUSSEX COUNTY**

| Race & Sex | Number | No. Naming Contacts | No. of Contacts Named | Type & No. Contacts | Number Examined | Primary & Secondary | Early Latent | Late Latent Congenital or Tertiary | Syphilis Known Previously | Non-Syphilitic | Not Located | Total New Cases |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| White Male | 1 | 1 | 6 | Marital Non Mar. | 6 | 5 | 2 | 1 | | 2 | 1 | 3 |
| White Female | 4 | 2 | 3 | Marital Non Mar. | 3 | 3 | 1 | 1 | | 1 | | 2 |
| Colored Male | 16 | 10 | 17 | Marital | 5 | 5 | 3 | 2 | | | | |
| | | | | Non Mar. | 11 | 10 | 5 | 3 | | 2 | 1 | 14 |
| | | | | Household | 1 | 1 | | | 1 | | | |
| Colored Female | 21 | 16 | 40 | Marital | 2 | 2 | 2 | | | | | |
| | | | | Non Mar. | 35 | 24 | 8 | 6 | 1 | 3 | 6 | 11 20 |
| | | | | Household | 3 | 3 | | 1 | 2 | | | |
| Original primary & secondary cases | | | | | | | | | | | | |
| TOTAL | 42 | 29 | 66 | | 53 | 21 | 14 | 4 | 3 | 11 | 13 | 39 |

Ratio of New Primary & Secondary Cases Found to 100 Original Cases Investigated ..... 50
Ratio of New Primary, Secondary & Early Latent Cases Found to 100 Original Cases ..... 83
Ratio of New Cases of Syphilis Found (All Types) to 100 Original Cases Investigated ..... 92.8

**TABLE II**

**RESULTS OF CONTACT INVESTIGATION OF EARLY LATENT CASES OF SYPHILIS IN SUSSEX COUNTY**

| Race & Sex | Number | No. Naming Contacts | No. of Contacts Named | Type & No. Contacts | Number Examined | Primary & Secondary | Early Latent | Late Latent Congenital or Tertiary | Syphilis Known Previously | Non-Syphilitic | Not Located | Total New Cases |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| White Male | 1 | 1 | 1 | Marital Non Mar. | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 1 |
| White Female | 0 | 0 | 0 | Marital Non Mar. | | | | | | | | |
| Colored Male | 30 | 23 | 36 | Marital | 14 | 12 | 1 | 9 | 0 | 0 | 2 | 2 |
| | | | | Non. Mar. | 20 | 12 | 1 | 6 | 1 | 0 | 4 | 8 19 |
| | | | | Household | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 |
| Colored Female | 45 | 20 | 25 | Marital | 4 | 4 | 0 | 2 | 0 | 1 | 1 | 0 |
| | | | | Mon. Mar | 20 | 13 | 1 | 5 | 1 | 5 | 1 | 7 10 |
| | | | | Household | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Original early latent cases. | | | | | | | | | | | | |
| TOTAL | 78 | 44 | 62 | | 45 | 3 | 23 | 4 | 7 | 8 | 17 | 30 |

Ratio of New Primary & Secondary Cases Found to 100 Original Cases Investigated ..... 3.2
Ratio of New Primary, Secondary & Early Latent Cases Found to 100 Original Cases ..... 33
Ratio of New Cases of Syphilis Found (All Types) to 100 Original Cases Investigated ..... 38

to which he is entitled. This accomplishment is not as near at hand as it should be. A new and revised report form is necessary for the

physician to use in reporting his cases. The revised form must be simple, it must be complete and its value must be evident so that the physician will use it. This revision of the old form is being done at the present time. Continued educational efforts must be made so that the public will consult their physician at the first sign of trouble. The need for prompt and adequate treatment of an approved type must be understood by all who are infected with the disease. A full understanding of this need is necessary in maintaining the cooperation of the patient.

That epidemiological control work in private practice is feasible and capable of accomplishment is pointed out by Ingraham (1). He cites the result in New Jersey of a long term venereal disease control program. In the 10-year period 1926-1936 approximately one-sixth of the private physicians in New Jersey cooperated to the extent of submitting 2,295 names of individuals as contacts of 2,109 infectious cases of syphilis. These contacts were investigated through the Division of Venereal Disease Control and the local health officers. 946, or 72% of the contacts investigated were found to have syphilis and were were placed under treatment. These results compare favorably with those obtained in a good venereal disease clinic.

The two tables, I and II, summarize the results, expressed in terms of new cases found, of the epidemiological study of two groups of patients. The first table is the result of the investigation of a group of primary and secondary syphilities and the second table is based on a study of early latent syphilities (syphilis of less than four years duration). They include all of the patients of each type contained in the active files of the venereal disease clinics of the State Board of Health in Sussex County (clinics located in Georgetown, Seaford and Frankford). It is based on a form used by Turner, Gelperin and Enright (2).

These cases included all those coming to the clinic voluntarily and those referred by physicians for diagnosis and treatment. Only those contacts living in Delaware were considered, all contacts named as living outside of the state were discarded and were not included in the tabulation. As many of these cases live within a short distance of the Delaware-Maryland line and as they move about frequently, this discarded group was not a small one. Some names were never located due to false or incomplete addresses or possible inaccuracies of the name itself. These were included in the table and classified as not located.

At times contacts of original cases gave additional names and these contacts of contacts were all classified as contacts of the first case. The results of the examination were classified as (1) primary or secondary syphilis, (2) early latent syphilis, (3) late latent, congenital or tertiary syphilis, (4) syphilis known previously, (5) negative for syphilis and (6) not located. Early latent syphilis was considered as being of less than 4 years duration, and late latent syphilis, of more than four years duration. In both groups there was no clinical evidence, only the positive Wassermann and Kahn tests. As the clinics are predominately colored, very few white cases are included. The contacts were divided into marital, non-marital and household types. Marital contacts were those living as husband or wife, whether married or not. Household contacts were those living in the same home but not as a marital partner.

Obviously, the number of cases is so small as to preclude the drawing of any but very broad conclusions and these conclusions must be based on the entire group rather than on any small group of particular sex or color. The study should be considered merely as a means of showing the type and distribution of new cases of syphilis found by means of an investigation of two groups of original cases. There were 30 new cases found in an investigation of 78 original cases of early latent syphilis, and 39 new cases were found in an investigation of 42 original cases of primary and secondary syphilis. Expressed as new cases found per 100 original cases investigated, there were 38 found per 100 investigated in the early latent group, and in the primary and secondary group there were 92.8 found per 100 investigated. Going one step further in the investigation of the early latent group, there were 3.8 new primary

and secondary cases found per 100 cases investigated. If the new early latent cases are included (and we feel that many of this type are infectious as far as sexual intercourse is concerned) there were 33 cases of new infectious syphilis found per 100 investigated. In the investigation of the primary and secondary group, there were 50 new primary and secondary cases found per 100 investigated. If the new early latent cases are added to this it makes a total of 83 infectious cases of syphilis found per 100 investigated.

One interesting finding made during the study of the histories of these cases is the fact that all of the new female syphilitics found in each group were of child-bearing age, a fact that gives added importance to their being found and subsequently treated.

A comparison of the results of epidemiological work in the two groups reveals the same conclusion reached by other workers, that contact work in primary and secondary cases is much more productive of new cases than is similar work done in latent syphilitics. The effort in dealing with these early cases is greater and more enthusiastic and the contacts named by the patient are more likely to have acquired the infection than are contacts of a latent case.

### SUMMARY

1. The importance of epidemiological work in a syphilis control program is emphasized.

2. The unbalanced V. D. control program in Delaware is criticized.

3. The method of accomplishing such work in the Sussex County clinics is briefly outlined and a study of the results of such work is charted.

4. The examination of 45 contacts of a group of 78 original cases of early latent syphilis resulted in the finding of 30 new cases of syphilis. This is a ratio of 38 new cases found to 100 original cases investigated.

5. The examination of 53 contacts of a group of 42 original cases of primary and secondary syphilis resulted in the finding of 39 new cases of syphilis, a ratio of 92.8 new cases to 100 original cases investigated.

### CONCLUSIONS

The value of epidemiological investigative work in the control of syphilis, particularly the work in the early infectious cases, is evident from a study of the records of the syphilis clinics in Sussex County. Similar service must be offered to physicians in private practice if the venereal disease control program is to be properly balanced and a reasonable degree of success attained in the handling of the problem.

### REFERENCES

(1) Ingraham, N. R., Jr.: Contact and Case Holding—New Jersey, V. D. Information, March, 1938.
(2) Turner, T. B., Gelperin, A., and Enright, J. R.: Results of Contact Investigation in Syphilis in an Urban Community, Amer. J. of Pub. Health, July, 1939.

## INFANT MORTALITY IN DELAWARE

FLOYD I. HUDSON, M. D.*
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The infant mortality rate of any geographic area is an index to the degree of civilization or intelligence that the people of such an area have acquired. The care given children and consequently the number of deaths of children unable to care for themselves surely reflects on the attitude and aggressiveness of any people. Infant mortality rate is measured by the number of deaths under one year of age per 1,000 live births, and is to be so construed where mentioned in this paper.

Two countries in the world have achieved almost the ideal in reducing their infant mortality rates. New Zealand has the very low rate of 32. Holland has the rate of 40. Other countries with rates lower than the United States are Australia, Norway, Sweden and Switzerland. The rate for the United States was 54 in 1937. In Delaware during the same year 65 infants died for every 1,000 babies born. In 1918, the Delaware rate was 144, the highest rate since recording of statistics of this nature in this state was begun. The marked reduction in the rate, between 1918 and 1937, a period of twenty years, may be ascribed to a reduction in the rate of infants dying from the second through the twelfth month and to decreasing mortality from gastrointestinal and other communicable diseases. The number of babies dying dur-

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ing the first month of life remains practically the same in 1918 and 1937.

Table I gives a yearly comparison of the rate of deaths of infants since 1918:

TABLE I

| Year | No. of Infant Deaths | Infant Mortality Rate |
|---|---|---|
| 1918 | 769 | 144 |
| 1919 | 562 | 108 |
| 1920 | 590 | 104 |
| 1921 | 501 | 94 |
| 1922 | 472 | 93 |
| 1923 | 474 | 97 |
| 1924 | 421 | 83 |
| 1925 | 420 | 84 |
| 1926 | 393 | 86 |
| 1927 | 303 | 65 |
| 1928 | 340 | 78 |
| 1929 | 350 | 82 |
| 1930 | 349 | 78 |
| 1931 | 352 | 84 |
| 1932 | 287 | 67 |
| 1933 | 234 | 59 |
| 1934 | 244 | 60 |
| 1935 | 269 | 66 |
| 1936 | 254 | 65 |
| 1937 | 290 | 67 |
| 1938 | 241 | 53 |

The marked decrease from 1918 to 1938 does not mean that we have reached the ideal in reduction of this rate. Studies in other countries convince us that the above figures can be made even lower by a proper program of cooperation between obstetricians, pediatricians, general practitioners and the health department. Of course, a concomitant educational program for the public at large should be carried out.

Delving further into Delaware statistics there are several things of interest that may be noted. Figures show that the colored rate is very much higher than the white rate. In 1937 the colored rate was 112 and the white rate was 53 or less than half as high. In 1938 the colored rate fell to 77 while the white rate remained nearly the same, at the figure of 50. The difference in the colored rates for the years 1937 and 1938 seems quite large, but we must bear in mind that the number of colored births in Delaware is small and that the above figures for any two years are not statistically significant. In any year, as in 1938, when the deaths from pneumonia and diarrhea are small the infant mortality rate is materially decreased. It is hoped that the low rate for 1938 can be continued and great efforts are being made in that direction. For example, much literature and educational data have been used to keep low the incidence of diarrhea. Board of Health nurses give this preventive advice in every home visited. They urge all children or adults with diarrhea to see a physician at once.

The rate in rural areas and in Wilmington varies greatly. Colored births in Wilmington in 1938 numbered 275. There were 19 infant deaths, giving a rate of 68. In Sussex County during the same time there were 202 colored births and 23 colored infant deaths, producing a rate of 113 or almost double the Wilmington rate. One reason for this is that 75% of colored births in Wilmington are either hospitalized or attended by a physician. In Sussex County only 30% are attended by a physician or sent to a hospital, leaving midwives to deliver the remaining 70%.

Table II shows the percentage of all births attended by hospital, physician, midwife, or other:

TABLE II

| | 1936 | | | 1938 | | |
|---|---|---|---|---|---|---|
| Attendant | W. | C. | W.&C. | W. | C. | W.&C. |
| Hospital .... | 56% | 25% | 51% | 67% | 32% | 61% |
| Physician.... | 92% | 56% | 86% | 95% | 52% | 87% |
| Midwife or Other .... | 8% | 44% | 14% | 5% | 48% | 13% |

As can be seen, the number of cases seen by midwives is relatively small for whites and comprised nearly half of all colored deliveries in the state. In spite of our efforts to have each mother given pre-natal care this condition is far from accomplished especially in the counties of the state where the physicians themselves must shoulder the burden of care since there are no other medical services for pre-natal cases such as exist in the city of Wilmington. It is essential, if further progress is to be made that a satisfactory pre-natal service be provided for all cases to be delivered by midwives. In this manner complicated cases can be weeded out and put in the hands of competent physicians. The midwife could then handle only those cases which are considered unlikely to have complications.

It is gratifying to know that numerous pre-natal cases, unable to pay for service, were examined in physicians' offices all over the state at the request of public health nurses in the past year. Such service, however, is

a burden on a practicing physician and should not be demanded of him.

Means of overcoming the problems mentioned will aid not only in reducing the infant mortality rate but also the maternal mortality rate to figures which will be creditable to the citizens of Delaware. It is the duty of all of us to aid and give support to any rational program directed to improve our state along these lines.

## APPROVAL OF LABORATORIES MAKING SEROLOGICAL TESTS FOR SYPHILIS

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An Act passed by the last Legislature and signed by the Governor requires that all laboratories making serodiagnostic tests for syphilis from prenatal cases be approved by the State Board of Health. In order to approve these laboratories it is necessary that they use an approved serodiagnostic technic, such as Kolmer, Kahn, Kline, etc. These laboratories should be evaluated as to sensitivity and specificity. By sensitivity is meant the ability of the test or tests to react positively with samples of blood from syphilitic individuals. Specificity means freedom from false positive reactions.

During the past three years, this Laboratory took advantage of the opportunity which was offered by the Division of Venereal Diseases of U. S. Public Health Service to all state and branch laboratories to collaborate in the evaluation of sero-diagnostic tests for syphilis. The Kahn and Kolmer tests were evaluated for sensitivity and specificity by the examination of approximately 200 samples of blood from syphilitic patients and 100 samples from non-syphilitic patients and comparing our results with those obtained by the originators of these tests. This Laboratory received an excellent rating in both tests and was approved by the U. S. Public Health Service.

Dependable serological examination is the foundation of syphilis control. If syphilis control is to be accomplished in this state, it is essential that serological tests be of high accuracy whether performed in the State Laboratory or in a small isolated laboratory. The tests used should be of sufficient scope to differentiate accurately serums of marked and slight specific activity in order to avoid prozone effects. Positive reactions are not obtained or are obtained only in rare instances, with specimens from persons in good health apparently free of syphilis. Definite reactions are obtained in all but a small percentage of instances with specimens from untreated patients with manifestations of syphilis. As a tentative plan for the approval of laboratories in this state doing serodiagnostic tests for syphilis, I would make the following suggestions:

*First,* that the State Board of Health Laboratory, which has attained a satisfactory standard of efficiency in the performance of sero-diagnostic tests for syphilis, serve as the control.

*Second,* to give a fair estimate of the performance of any test in terms of specificity and sensitivity, the number of specimens from specially selected non-syphilitic donors and specially selected syphilitic donors should be not less than 100.

*Third,* that the syphilitic and non-syphilitic donors be selected by the Director of the Division of Communicable Disease Control and his assistants, and be completely documented in order that the status of the patient be clearly established.

*Fourth,* as the sensitivity of the test is determined by its ability to detect miminal concentrations of reagin, the syphilitic donors should be selected on a basis to include not more than 20 per cent of positive serums containing large amount of reagin. The balance of the syphilitic donors should be selected from patients with treated and untreated syphilis whose sera might be expected to contain limited amounts of reagin.

*Fifth,* for the purpose of specificity, the negative controls should be drawn from presumably normal non-syphilitic individuals. These controls should also include specimens from persons presenting other conditions such as febrile states, cancer, and pregnancy.

*Sixth,* to qualify as satisfactory, a laboratory should attain a sensitivity rating not

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more than 10 below that of the control, and a specificity rating of not less than 98%.

*Seventh,* laboratories once approved should be re-examined at least once every two years. Opportunity for retesting should be offered more frequently to those laboratories which fail to gain a satisfactory rating.

This plan follows, substantially, the method used by the U. S. Public Health Service in evaluating the state and branch laboratories.

## ANOTHER STEP FORWARD IN PUBLIC HEALTH

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As one looks back over the public health program as it has developed in this state there is a certain measured satisfaction in recording that at least some of the elementary problems of public health have been attacked and in a good measure overcome. Recollection of the first statewide survey made in 1934 reveals the fact that the first important step in the modern health department was to control the milk supply that was being retailed in the many towns of the state. The conditions found in the many dairies were very primitive, and there was considerable resentment when the first statewide milk code was adopted. Since that time, through educational programs and through tactful handling of these problems by the inspectors, we have arrived at the point today where pasteurized milk is available to all the incorporated towns in this state, with the exception of three. This includes the towns with population as low as 200 to 300. Furthermore, the average bacteria count of all supplies delivering to the communities outside of the city of Wilmington has been lowered to 21,500, which is less than one-half of the bacteria count required under our grade A regulations. This is a credit to the dairymen who are taking the pains to deliver daily a satisfactory milk supply. The effect of this work undoubtedly has been felt in the reduction of the infant mortality rate in this state.

Following the milk program came the efforts to induce many towns in this state, still unsewered, to arrange for better facilities from this sanitation standpoint. An impetus was given to this by sanitary surveys made in the various towns as an attempt to congeal whatever thought had been centered on this problem by interested citizens in many of the smaller towns. Coincident with this municipal program also was the attempt to provide proper sewage and water facilities for our state and county institutions. This program reached its peak during the 1933-38 period when public funds were available as grants and aids from the Federal government. Towns such as Middletown, Rehoboth, Georgetown and Harrington took advantage of this opportunity to install complete sewerage systems, while sewage treatment plants were constructed in Milford and Dover. Paralleling this work was the very extensive sewerage program initiated by the New Castle County Levy Court, and which has been greatly expanded through Federal aid, so that numerous unincorporated communities in the Wilmington metropolitan area are now being served, which in conjunction with the rapid expansion of highway facilities has made possible adequate facilities for both water and sewage and for transportation in these areas.

During the past four years an attempt has been made to provide sanitation for the unsewered areas in many of the incorporated towns in this state as well as the isolated farm buildings, dairies and other properties. The community sanitation program, which is operated in conjunction with the U. S. Public Health Service and the W. P. A., has practically sanitated the unsewered areas in all the incorporated towns in New Castle county with the exception of Wilmington, and work is now progressing in the two lower counties.

Coincident with the development of the splendid highway program has occurred the necessity for inspection of the sanitary facilities available including the water supply and sewage disposal at the various service stations which dot our main highways. This work has been done periodically each year and has included also the inspection of food establishments. This problem itself has taken

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considerable time, but has also resulted in satisfactory facilities being made available to the public in the great majority of service stations throughout the state.

The above programs have been directed toward the elemental sanitary conditions in this state and have brought us forward to another step in sanitation. This next step involves a certain segment of our population, namely, the industrial portion, and has to do with industrial hygiene. The extent of this problem may be roughly gauged by listing the industrial groups and the known number of the employees in the Wilmington area and evaluating these populations in terms of our incorporated communities, in order to give some idea of the population affected. The table below gives this graphic view.

WILMINGTON INDUSTRIAL ZONE

| Type of Industry | No. Employed | Equivalent to the Population of |
|---|---|---|
| Chemicals | 7947 | Dover & Seaford |
| Laundries, cleaners & dyers | 1792 | Georgetown |
| Textiles, rubber hose & rayon | 2738 | Harrington & Clayton |
| Printing and publishing | 558 | Greenwood |
| Leather products | 2660 | Middletown, Newport & Magnolia |
| Machine shops, plumbing, steel products | 2730 | Smyrna & Selbyville |

Throughout the country, under the impetus of the U. S. Public Health Service, a great deal of advance has been made in attacking the problems that have to do with the environmental sanitation as far as the workers are concerned. This is a problem also that is jointly in the province of the medical officer as well as the sanitary engineer. The former has to do with determining the factors that may or may not affect the health of the workers, while the duty of the engineer is to attempt to eliminate certain unsatisfactory conditions by changes in the plant operation or through the installation of devices that will reduce the hazards resulting under certain working conditions.

The investigation and compilation made by Dublin, of Metropolitan Life Insurance Company, in 1929, as a result of a study of three and one-quarter million wage earners, gave the greatest impetus towards focusing the minds of health workers on this problem. Dublin's figures included a wide variety of industries, both those which are especially productive of occupational diseases and also those which are present as outstanding health hazards. The life expectancy of the industrial workers was shown to be seven years less than that of those otherwise engaged. Age for age, their mortality rates were from one-half times to more than double the rates for the non-industrial worker, and he admitted that while heredity and innate differences played some part, probably the most important factors are the conditions incident to industrial employment such as toxic gases, dusts, specific occupational diseases, extreme temperature variations and numerous other industrial hazards. Tuberculosis rates are much higher in the industrial group and add to the cases in the general population, and rates for pneumonia and degenerative diseases are much higher in the industrial group. Anyone who has had a wide acquaintance with industrial establishments can readily picture how this group has borne more than their share of disability and disease. In many plants throughout the United States no thought has been given to these problems. On the other hand many of the modern and larger industries pay particular attention to these factors and have maintained staffs solely for the purpose of either alleviating or eliminating many industrial hazards.

A very small beginning in industrial hygiene has been made in this state in cooperation with the U. S. Public Health Service. A detailed and extensive survey was made of the General Chemical Plant at Claymont, this plant being chosen because of the manufacture of chemicals and of its varied products. The cooperation received from the company itself has been excellent, and recently surveys have indicated much progress in eliminating certain industrial hazards. It might be said parenthetically that in the industrial survey, health and safety work intermesh very closely. In no other field in public health with which the writer is familiar do these two phases of public work so closely coincide.

The survey of the Chemical Company has given us a pattern to be used in making surveys of other industries in which it is felt that industrial hazards may be present. This work will entail the cooperation of industries,

and it is to be hoped that after the preliminary survey of the problem has been made in this state, the same advance which has occurred in elemental sanitation in this state will also occur in the industrial segment. The cooperation received from our first venture warrants the assumption that the same cooperative spirit will come from the other industries located here.

## WHY CARE FOR THE DECIDUOUS TEETH?

MARGARET H. JEFFREYS, R. D. H.*
Dover, Del.

The title of this paper—why care for the deciduous teeth—is a question often asked of members of the medical and dental professions.

For centuries it has been a belief that care for the deciduous teeth is unimportant, since they are eventually replaced by the permanent dentition. During the last twenty-five or thirty years dental science has demonstrated the fallacy of such a belief and today we are becoming more conscious of the necessity for adequate dental care from the time the deciduous teeth erupt. A still newer theory places the responsibility in the hands of the expectant mother. She is not only instructed as to care that should be given her own teeth but is advised concerning the types of foods essential to the building of strong teeth for her child.

It is obvious that deciduous teeth require care to preserve them for mastication. Since food is essential to development and growth, it is apparent that during the great period of growth, which occurs while many of the deciduous teeth are in place, the implements for preparing this food for digestion should be in a healthy condition.

There, too, is the question of mal-occlusion, one of the most common defects found among adolescents and adults. The late Dr. C. N. Johnson, for many years editor of the American Dental Journal, called them "dental cripples," and quite correctly so. For again, so far as the preparation of food for digestion is concerned, they are handicapped by the loss of the use of their teeth as they are by the loss of any other bodily structure.

The opinions regarding this condition have been controversial. Some authorities believe the condition to be the result of thumb-sucking and mouth-breathing; others attribute it to the too-early extraction of the deciduous teeth, and the six-year molar. The popular opinion however is that it may be either one or the other. Both are very likely causes and neither one should be dismissed as of no consequence or a condition that may be corrected in later years. Most of us are aware of the tremendous cost of orthodontia. It is wiser to prevent a condition which need not occur.

The first permanent or six-year molar is the most discussed of all teeth, by virtue of the fact that it has been in the past, and still is, the most neglected. Why? First, it is believed by many to be a deciduous tooth and accorded the same attention, which is practically none at all. It erupts at about the sixth year, before the child has gained a complete knowledge of the use of the toothbrush and is not kept even reasonably free from food debris. It is located in proximity to the second deciduous molar which is often at that age in the process of decay, and becomes a likely victim of the same disease. It was estimated by Dr. A. C. Fones, founder of the oral hygiene movement, that the average child of twelve had lost or will lose from one to four of these teeth.

Finally, there is the relation of the teeth to the general health of the child. This is of greatest importance, yet a fact totally ignored by many persons. In our school work year after year we see the children whose resistance is gradually being lowered because of the poisons absorbed from neglected teeth. They are rendered more susceptible to all the childhood diseases, they are retarded in their studies, and a hindrance not only to their companions but the community at large. It is not their fault, though they are conscious of some symptoms of the defect. Instead, it is the fault of those who recognize the condition and do nothing about it, and of those

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who fail to recognize the health of the child as important.

Health education often makes slow progress. Yet that is the only solution to one of the greatest problems that confronts us today. Though delegated to the dental profession and associated groups as their responsibility, the task of educating the public to a consciousness of adequate dental care cannot be confined to them alone. Though more persons are seeking dental service than at any time in history, it is estimated that less than 20% receive adequate attention, a rather unfortunate situation but one not impossible to correct. The combined efforts of all interested in health can do much to effect change such as we have seen made in other fields. It may even be hoped with the interest that is now being manifested by lay organizations that in years, not too far in the future, children will be entering school with all defects corrected including the teeth, which have been in many cases, the most neglected part of the human body.

## THE PLACE OF NUTRITION IN A HEALTH PROGRAM

CHARLOTTE SPENCER*
Dover, Del.

The physician has always realized the fundamental relation between health and good food. During the past twenty years the science of nutrition has rapidly increased in importance until now it is in a position to offer valuable assistance and is ready to be integrated into nearly every field of medical endeavour.

In such groups as adult education classes, Red Cross food and nutrition classes, home demonstration clubs, and Parent-Teachers' Association meetings women can be taught the relation between a good diet and good health for the entire family. Sound nutrition information can be substituted for food fallacies which are too often gained from billboards, the radio, or the next door neighbor.

Families with a limited amount of money to spend for food can be helped to make a wiser expenditure for the food which they can buy. Assistance can be given in the use of surplus commodities which have been distributed and in the selection of other foods to supplement these most economically.

Nutrition has an important place in any well-planned maternal and child health program. Every prenatal woman needs definite information about the food she should eat. The recent work on the high vitamin $B^1$ requirement of pregnancy illustrates the importance which is being assigned to individual components of a well-balanced diet.

Modern knowledge of infant feeding is combining with the experience of medical practice to increase the number of well fed children and to decrease the amount of malnutrition, rickets, tuberculosis, infant diarrhea and other diseases which may follow directly or indirectly upon poor feeding.

The relation of diet to dental decay may not be clearly understood in all of its ramifications, but it appears to be definitely proven that a well-balanced diet throughout pregnancy and childhood will go a long way toward building sound, well-formed teeth, and teeth which will be more resistant to decay.

Families of tuberculosis patients need special instruction about their diet. Good food is of primary importance in the treatment of tuberculosis and if the patient is not admitted to a sanitorium, great care must be taken to explain the importance of good food at home, and to help his family give him the best diet which they possibly can. Other members of his family also need to be well fed if they are to escape infection.

Records of the crippled children's service of the State Board of Health show that over forty Delaware children have been surgically treated for crippling diagnosed as due to faulty nutrition. Special follow-up work is needed to make certain that other children in the same homes will not be similarly handicapped through being reared on the same poor diets.

The school offers an excellent opportunity to teach children how to select food wisely. Through the school lunch and through correlation of nutrition with classroom teaching

*Nutritionist, Delaware State Board of Health.

we can help our children to form good eating habits.

The day has passed when the only time medical men were concerned about food was in prescribing special diets. Modern science teaches us that in good nutrition we have a powerful weapon in preventing disease.

## STATE BOARD OF HEALTH

The State Board of Health issues the following statement to the profession:

"Recent changes in the personnel of the State Board of Health have been the successive resignations of Dr. Morris, Mrs. Trent, supervisor of nurses, and Dr. Jost. Dr. Morris and Mrs. Trent have joined the National Birth Control Federation of America, while Dr. Jost's plans are not known. The board is proceeding slowly in its selection of a man to fill the position left vacant by Dr. Jost's resignation and, until this position is filled, may not make any appointments to the other vacancies."

## AMERICAN CONGRESS OF OBSTETRICS AND GYNECOLOGY

Dr. Sylvester W. Rennie, of Wilmington, has been asked to act as chairman of the membership committee for Delaware for the American Congress of Obstetrics and Gynecology, which will hold its first congress in Cleveland September 11 to 15th, 1939.

The program for this Congress covers the whole field of obstetrics and gynecology and it is felt that many surgeons, obstetricians, and general practitioners would like to align themselves with this Congress, which represents a major effort in the raising of the standards of obstetrics. It will afford an excellent post-graduate education for those who attend.

An effort is being made to obtain fifty members in Delaware. The membership fee is five dollars, which also includes membership in the American Committee on Maternal Welfare. Subscriptions should be sent to the American Congress on Obstetrics and Gynecology, 650 Rush Street, Chicago, Illinois.

## MISCELLANEOUS

### The Professional Club at the New York World's Fair

Physicians, public health workers, medical scientists and other professionals visiting the New York World's Fair 1939 will find reserved for their exclusive use The Professional Club. Here members of the nation's professional health, medical, dental and nursing associations have a place to meet their colleagues in quiet, congenial surroundings.

Unique to this or any other world's fair, the club occupies an area of 5,000 square feet on the main floor of the Medical and Public Health Building, which is located on the Theme Plaza, its main entrance being directly opposite the Helicline leading around the Perisphere to the Trylon, where much of importance takes place daily.

The visitor will find awaiting him a comfortable lounge, attractively decorated and furnished, a bar and a snack bar, checking facilities, rest rooms, stenographic service, telephones, and other conveniences of a private club.

Membership in the club is limited to accredited members of the medical and public health and allied professions and to representatives of exhibit sponsors. Professional members pay no dues, but there is a small certification charge to cover the cost of validating credentials.

Products of manufacturers sponsoring scientific and educational exhibits in the Medical and Public Health Building are on display in showcases set artistically into the walls of the lounge. The club serves as a place where these and other sponsors of exhibits in the main exhibition halls may meet members of the medical and allied professions under pleasant circumstances.

The Medical and Public Health Exhibit, being both scientific and educational, comprises probably the largest single enterprise of its kind heretofore undertaken specifically for adult health education. The exhibit is in two sections. A vast Hall of Man, which sets

(*Concluded on Page* 188)

# EDITORIAL

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VOL. XI AUGUST, 1939 No. 8

## DELAWARE'S LOSS

The resignation of Doctor Arthur C. Jost, executive secretary of the Delaware State Board of Health, after more than ten years of service, came as a shock to the people of Delaware. His resignation became effective August 10th.

Doctor Jost, a native of Canada, was appointed executive secretary of the State Board in December 1928, succeeding Doctor Arthur T. Davis, taking over the office January 1, 1929. He came to Delaware with more than 20 years' experience in the field of public health. A graduate in Arts, from Acadia University, and in Medicine, from McGill University, Doctor Jost spent the early years of his professional career in country practice in Nova Scotia. For a number of years he was county health officer there, and for ten years was Provincial Health Officer of the Province of Nova Scotia. He was deputy registrar-general and inspector of humane and penal institutions. He was also a lecturer on hygiene in the Dalhousie University College of Medicine, and an examiner for the Medical Council of Canada. Since coming to Delaware he became a member of the Kent County Medical Society, Medical Society of Delaware, the American Medical Association, the American Public Health Association, the Conference of the State and Provincial Health Authorities of North America, and the State and Territorial Health Officers' Association. He has served on numerous committees for these organizations, and is the author of many medical articles. During the World War, Doctor Jost served with the Canadian forces as a medical officer, and was honorably discharged with the rank of lieutenant-colonel in the medical corps.

A gentleman, sensitive and retiring, Doctor Jost was completely engrossed in improving the health of the people of the state. His chief fault, if it can be called a fault, was in placing too much confidence in some of his subordinates not worthy of that confidence, believing they were as altruistic and as ethical as he.

Great strides forward in the health of Delaware were made in the past ten years under Doctor Jost's administration. To list all the achievements made during this period cannot be done here, nevertheless certain things should be mentioned: the improvement in the vital statistics records, which are now completely indexed, and the reporting of births and deaths is excellent; the reduction in the infant and maternal mortality rates; the decrease in deaths from communicable disease, deaths from tuberculosis, typhoid fever, diarrhea and enteritis, scarlet fever, and diphtheria were markedly reduced during

this period; the growth and improvement of the physical plants of Brandywine and Edgewood Sanitoria, although Edgewood is still inadequate for the burden thrust upon it; the marked improvement in sanitation, including milk supply, water supply, and sewage disposal; and last but not least, the increase year by year in the work done by the Laboratory on such a very limited budget has been a thing of wonder. These are some of the things that were accomplished. With all these activities Doctor Jost was the guiding spirit and director—a man to be remembered for his excellent work for the people of this state.

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### The Professional Club at the New York World's Fair

(*Concluded from Page* 186)

forth in unique fashion essential information on human anatomy and physiology, is under sponsorship of the American Museum of Health, with generous assistance from a number of philanthropic foundations and public-spirited life insurance companies and commercial institutions.

Adjoining the Hall of Man is the Hall of Medical Science and Public Health, an outstanding collection of exhibits on such subjects as tuberculosis, pneumonia, syphilis, maternity and child health. One of its high spots is the famed Carrel-Lindbergh artificial heart. Each of these exhibits is sponsored by a separate organization, whose representatives are eligible to club membership.

Local physicians, public health workers and allied professionals will utilize the club to entertain out-of-town guests brought here by the many meetings of national and international groups to be held in New York during the Fair.

Management of the club is vested in a board of directors which includes officers of the county medical societies of the five boroughs constituting the City of New York and of adjacent Westchester and Nassau counties. It is a non-profit membership organization, incorporated under the laws of New York State.

The officers of the club are Dr. James R. Reuling, Jr., president; Dr. Edward R. Cunniffe, vice-president; Dr. Matthias Nicoll, vice-president; Dr. B. Wallace Hamilton, treasurer, and Mrs. Willimina Rayne Walsh, secretary.

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### NEW YORK PREMARITAL LAW

Physician's examination and serological test of applicant for marriage license:

1. Except as herein otherwise provided, no application for marriage license shall be accepted by the town or city clerk unless accompanied by or unless there shall have been filed with him a statement or statements signed by a duly licensed physician or by a commissioned medical officer of the United States army, navy or public health service that each applicant has been given such examination, including a standard serological test, as may be necessary for the discovery of syphilis, made on a day specified in the statement, which shall not be more than the thirtieth day prior to that on which the license is applied for, and that in the opinion of the physician the person therein named is not infected with syphilis, or if so infected is not in a stage of that disease whereby it may become communicable.

The law further states "a standard serological test shall be a laboratory test for syphilis approved by the state commissioner of health and shall be performed by the state department of health, or in the city of New York by the department of health of such city, or at a laboratory approved for this purpose by the state department of health, or in the city of New York, by the department of health of such city."

I offer the following comments relative to its interpretation:

1. A duly licensed physician means any physician duly licensed to practice medicine in the state in which he resides or in which he maintains his office.

2. The date of examination is interpreted to mean the date on which the specimen of blood is taken.

3. The state commissioner of health and

the state department of health referred to mean commissioner of health of the state of New York and the New York State Department of Health.

4. Laboratory tests made as a part of premarital examinations for persons applying for marriage licenses in New York state, outside of New York City, as well as the laboratories in which these tests are performed, must be approved by the New York State commissioner of health. For administrative reasons laboratories within New York State only have been approved for tests on applicants for licenses in the state exclusive of New York City.

5. The Commissioner of Health of the city of New York has approved certain out-of-state laboratories for the performance of serological tests on persons applying for marriage licenses in New York City. Requests for information concerning laboratories approved by the New York City Department of Health should be addressed to that department at Worth and Centre Streets, New York City.

Outline of procedures for examination of out-of-state applicants for marriage licenses in New York State exclusive of New York City:

1. Any physician duly licensed to practice medicine in the state in which he resides or in which he maintains his office may perform the necessary physical examination.

2. The specimen of blood must be sent to an approved laboratory in New York State. It is suggested that specimens be sent to the Division of Laboratories and Research, New York State Department of Health, New Scotland Avenue, Albany, N. Y., where examinations will be made free of charge.

3. The specimen should be labeled "for premarital examination."

4. The use of air mail is recommended when the specimen must be sent a great distance.

5. Upon completion of the test the laboratory will send the physician, in addition to the usual laboratory report, a certificate to the effect that the serological test was performed as a part of a premarital examination.

6. If, in the opinion of the examining physician the applicant is free from syphilis or does not have the disease in a stage which may become communicable, he should complete the certificate as indicated thereon.

7. The certificate is given to the applicant who will submit it to the clerk when the marriage license is applied for.

If these procedures are followed, there should be no difficulty in obtaining the license.

For further information relative to the marriage of persons in New York State, exclusive of New York City, communications should be addressed to the Division of Syphilis Control, New York State Department of Health, Albany, N. Y.

EDWARD S. GODFREY, JR., M. D.
Commissioner of Health.

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## BOOK REVIEWS

Operative Orthopedics. By Willis C. Campbell, M. D. Pp. 1154, with 845 illustrations. Cloth. Price, $12.50. St. Louis: C. V. Mosby Company, 1939.

For many years the American profession has awaited an authoritative textbook on operative orthopedics, as distinct from a general text on orthopedics. Such a work is now at hand, and Dr. Campbell has performed his task exceptionally well, based on over twenty years of work in this field. He has made no attempt to have the work encyclopedic, yet he includes all the major operations that, in his judgment, conform to the proper mechanical and physiological principles, to the end that normal function may be attained.

The style is concise yet readable; the many illustrations are excellent; and the index has not failed us yet. This book should prove of particular value to every general surgeon who operates on bone or joint lesions; it will be a long time before its equal appears.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the A. M. A. Pp. 123. Cloth. Price, $1.00. Chicago: American Medical Association, 1939.

This volume is a reprint of the reports of the Council which were published in 1938 in the *Journal of the A. M. A.*, together with editorial comments thereon. In order to complete the record it also contains reports which were not published, because of their lesser importance. It is essentially, therefore, a record of the negative findings of the Council, in contrast to their N. N. R. (reviewed next month), which represents their positive findings. As such, it will be of primary interest to chemists and pharmacologists.

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Do You Want to Be a Doctor? By Morris Fishbein, M. D., Editor of The Journal of the A. M. A. Pp. 176. Cloth. Price, $1.50. New York: Frederick A. Stokes Company, 1939.

The prolific Fishbein has written thirteen previous books and edited five other works. This time, for the benefit of son Justin—and, we hope, thousands of others—he essays the role of career advisor. The publishers plan a series of vocational guides covering such professions as medicine, banking, journalism, law, engineering, accounting, etc. It is significant that the volumes on medicine and banking are the first to appear.

Most prolific writers eventually turn out to be either sporific or terrific. Not so The Fishbein: he has here a mighty valuable book, with all the answers. Inquiring youth will find here the necessary data on preparation for the medical school, choice of a medical school, costs of medical education, the interneship, state licensing boards, specialists, average income, etc. Valuable also are the chapters on beginning practice and on the future of medicine, about which the author is guardedly optimistic.

If the other volumes that are to compose the Stokes Vocational Guides measure up to the standard set by Fishbein in this one, the whole set ought to be placed in every high school library.

# 1789—MEDICAL SOCIETY OF DELAWARE—1939

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1939